

Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)



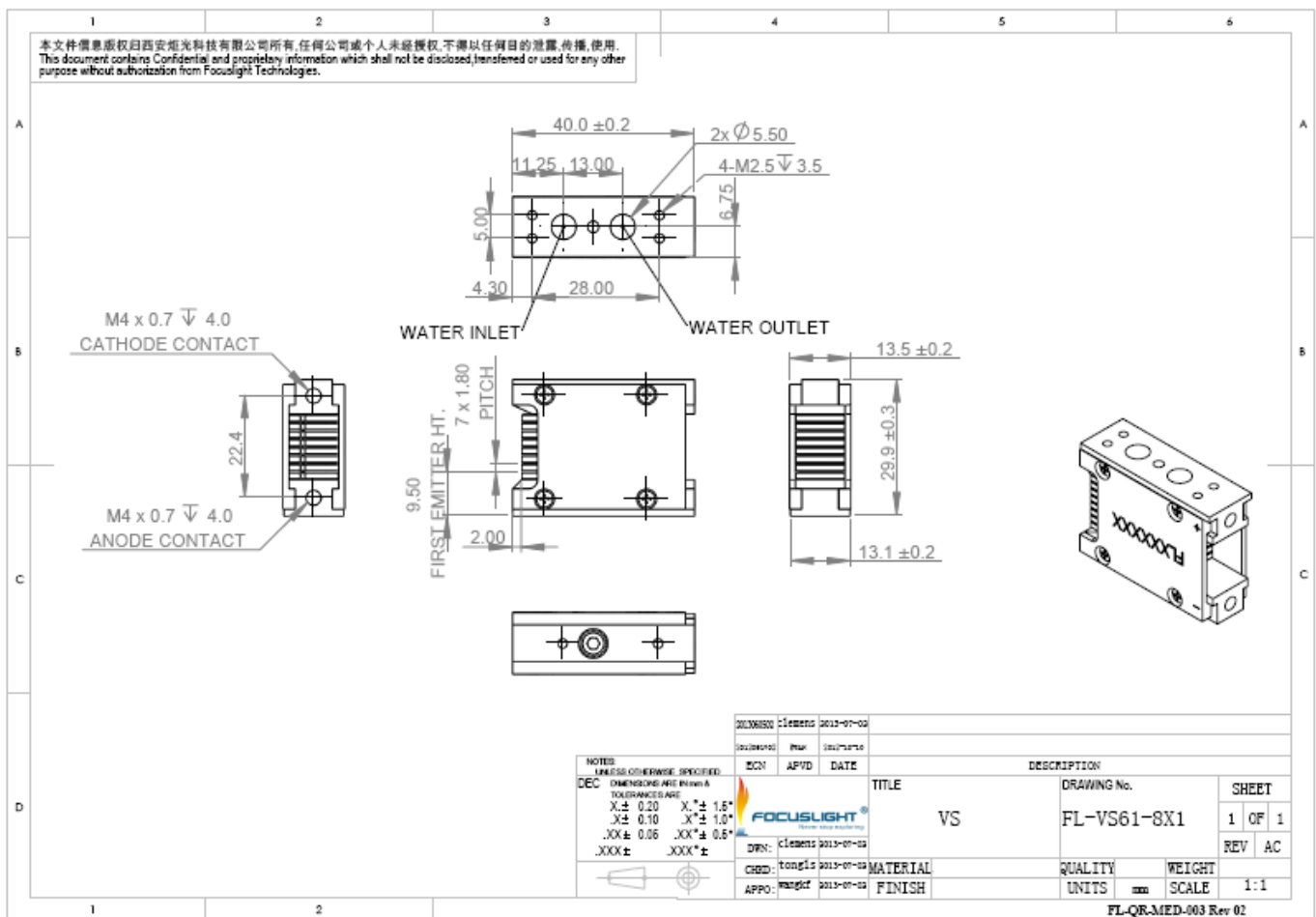
Features

- Long lifetime
- Uniform beam profile
- High power

Applications

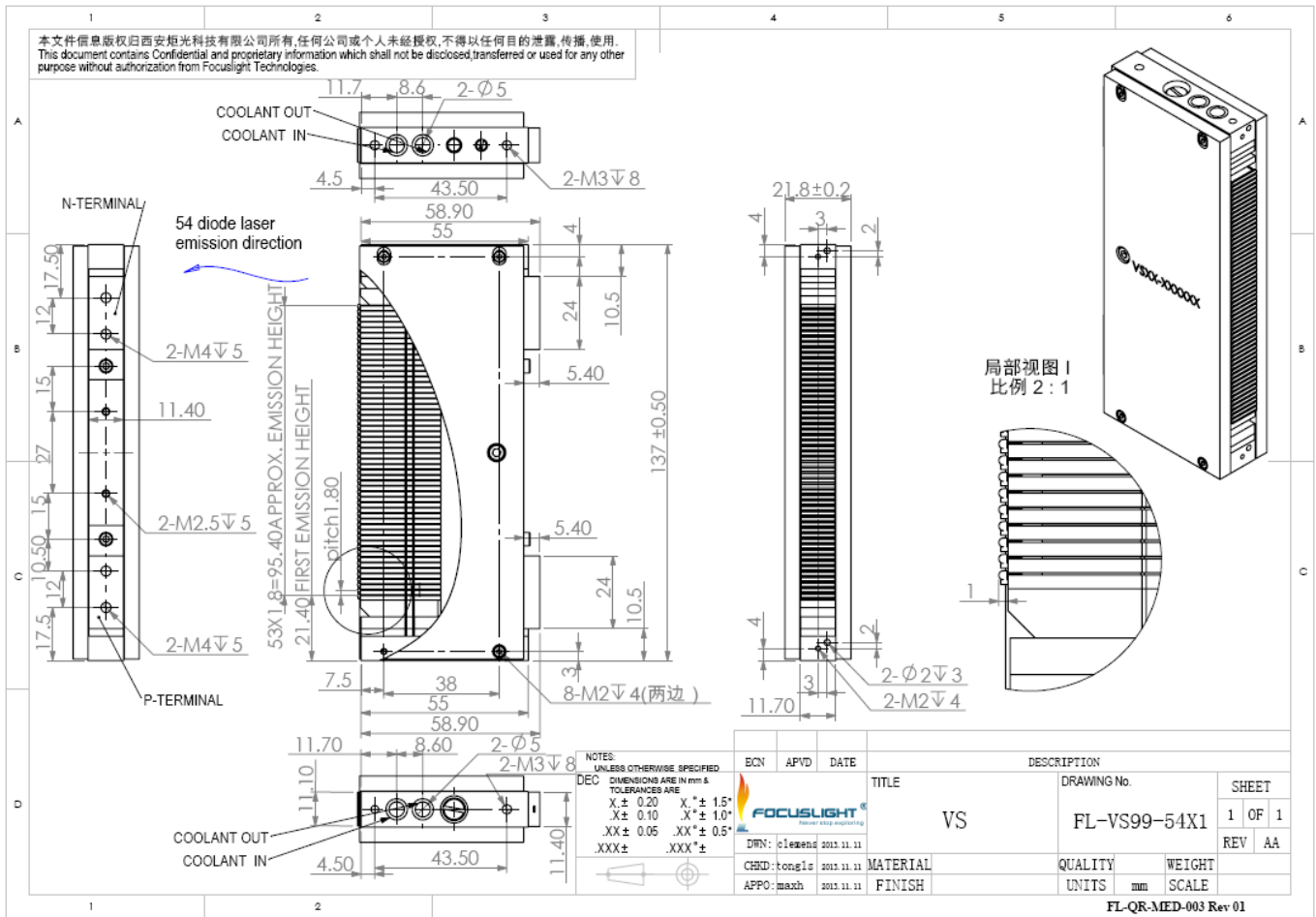
- Medical & Cosmetic
- Pumping
- Scientific research
- Industry

Device Dimension (mm)



- 1 This structure drawing is only for reference. More structure drawings can be found below the datasheet. For any other special requirement, please feel free to contact us.
- 2 Drawings for 1-12 bars are available. Please contact Focuslight for details.

Device Dimension (mm)



1 This structure drawing is only for reference. More structure drawings can be found below the datasheet. For any other special requirement, please feel free to contact us.

2 Drawings for 1-60 bars are available. Please contact Focuslight for details.

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Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)

Specification

Module Type ¹	Units	FL-VS**-N- ##-808	FL-VS**-N- ##-808	FL-VS**-N- ##-808	FL-VS**-N- ##-9XX	FL-VS**-N- ##-9xx
Optical ²						
Center Wavelength λ	nm	808	808	808	9XX	9XX
Wavelength Tolerance	nm	± 3	± 5	± 10	± 5	± 5
Output Power per Bar ³	W	100	100	100	100	120
Number of bars	#	1~60	1~60	1~60	1~60	1~40
Bar-to-Bar Spacing	mm	1.8	1.8	1.8	1.8	1.8
Spectral Width FWHM	nm	≤ 3	≤ 3	≤ 3	≤ 4	≤ 4
Spectral Width FW90%E	nm	≤ 6	≤ 6	≤ 6	≤ 8	≤ 8
Fast Axis Divergence(95%) ^{4,9}	degree	70	70	70	55	55
Slow Axis Divergence (95%) ⁵	degree	12	12	12	12	12
Polarization Mode	-	TE/TM	TE	TE/TM	TE	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.28	~ 0.28	~ 0.28	~ 0.28	~ 0.28
Electrical Parameters ³						
Operating Current I_{op}	A	≤ 120	≤ 120	≤ 120	≤ 110	≤ 120
Threshold Current I_{th}	A	≤ 25	≤ 25	≤ 25	≤ 15	≤ 20
Operating Voltage V_{op} ⁶	V	≤ 2.0	≤ 2.0	≤ 2.0	≤ 1.8	≤ 1.8
Slope Efficiency ⁶	W/A	≥ 1.1	≥ 1.1	≥ 1.1	≥ 1.1	≥ 1.1
Power Conversion Efficiency	%	≥ 48	≥ 48	≥ 48	≥ 60	≥ 60
Thermal Parameters						
Operating Temperature ⁷	°C	20~30	20~30	20~30	20~30	20~30
Storage Temperature ⁸	°C	0~55	0~55	0~55	0~55	0~55
Coolant	-	Deionized Water	Deionized Water	Deionized Water	Deionized Water	Deionized Water
Flow Rate/Bar	L/min	0.3~0.4	0.3~0.4	0.3~0.4	0.3~0.4	0.3~0.4
Max Inlet Pressure	kPa	380	380	380	380	380
Resistivity	M Ω *cm	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5

¹Explanation for the name of Module Type: FL(abbreviation of Focuslight) - VS**(structure code) -N(Number of Bars) -##(Power) -808(center wavelength).

²Data at 25°C temperature, unless otherwise stated.

³Standard power configuration : 60W/Bar, 80W/Bar, 100 W/Bar

⁴For fast axis collimation: divergence $< 0.5^\circ$.

⁵Fill factor $< 30\%$, slow axis collimation $\leq 5^\circ$; fast and slow axis collimation at the same time is available.

⁶Parameters for single Bar

⁷ If exceed operating temperature, the device lifetime will be impacted, which will cause wavelength drift

⁸ Please avoid use and storage in the condensation environment

⁹ For smile requirements, please contact us.

Please feel free to contact with Focuslight if you have any requirement.